

Oracle Access Manager Integration  
Oracle FLEXCUBE Universal Banking  
Release 12.0.2.0.0  
October 2013



---

# Table of Contents

<b>1. PREFACE .....</b>	<b>1-3</b>
1.1 INTRODUCTION .....	1-3
1.2 AUDIENCE .....	1-3
1.3 ABBREVIATIONS .....	1-3
1.4 DOCUMENTATION ACCESSIBILITY .....	1-3
1.5 ORGANIZATION .....	1-3
1.6 GLOSSARY OF ICONS .....	1-3
1.6.1 <i>Related Documents</i> .....	1-4
<b>2. ENABLING SINGLE SIGN-ON WITH ORACLE ACCESS MANAGER .....</b>	<b>2-1</b>
2.1 INTRODUCTION .....	2-1
2.2 BACKGROUND AND PREREQUISITES .....	2-1
2.2.1 <i>Software Requirements</i> .....	2-1
2.3 BACKGROUND OF SSO RELATED COMPONENTS .....	2-2
2.3.1 <i>Oracle Access Manager (OAM)</i> .....	2-2
2.3.2 <i>LDAP Directory Server</i> .....	2-2
2.3.3 <i>WebGate/AccessGate</i> .....	2-2
2.3.4 <i>Identity Asserter</i> .....	2-2
2.4 CONFIGURATION .....	2-3
2.4.1 <i>Pre-requisites</i> .....	2-3
2.5 ENABLING SSL FOR WEBLOGIC AND OAM CONSOLE .....	2-3
2.5.1 <i>Self-signed Certificate Creation:</i> .....	2-3
2.5.2 <i>Configuring Weblogic Console</i> .....	2-4
2.6 CONFIGURING SSO IN OAM CONSOLE .....	2-8
2.6.1 <i>Identity Store Creation</i> .....	2-8
2.6.2 <i>Creating Authentication Module</i> .....	2-14
2.6.3 <i>Creating OAM 11g Webgate</i> .....	2-14
2.6.4 <i>Post OAM Webgate 11g Creation Steps</i> .....	2-18
2.7 FIRST LAUNCH OF FLEXCUBE AFTER INSTALLATION .....	2-23
2.7.1 <i>Bank Parameter maintenance</i> .....	2-23
2.7.2 <i>Maintaining Branch Level DN Template (Branch Maintenance)</i> .....	2-24
2.7.3 <i>Maintaining LDAP DN for FCUBS users</i> .....	2-25
2.7.4 <i>Launching FLEXCUBE</i> .....	2-26
2.7.5 <i>Signoff in a SSO situation</i> .....	2-28

---

# 1. Preface

## 1.1 Introduction

This manual discusses the integration Oracle FLEXCUBE Universal Banking and the Oracle Access Manager system. The configurations required for the proper functioning of this integration, and further processing are documented in this manual.

## 1.2 Audience

This manual is intended for the following User/User Roles:

Role	Function
Back office data entry Clerks	Input functions for maintenance related to the interface.
Back office Managers/Officers	Authorization functions.

## 1.3 Abbreviations

Abbreviation	Description
System	Unless specified, it shall always refer to Oracle FLEXCUBE
OAM	Oracle Access Manager
UBS	Universal Banking Solutions
SSO	Single Sign-on
LDAP	Lightweight Directory Access Protocol

## 1.4 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.



## 1.5 Organization

This manual is organized into the following chapters:

<b>Chapter 1</b>	<i>Preface</i> gives information on the intended audience. It also lists the various chapters covered in this User Manual.
<b>Chapter 2</b>	<i>Enabling Single Sign-on (SSO) with Oracle Access Manager</i> discusses the method to integrate Oracle FLEXCUBE with Oracle Access Manager for Single Sign-on.

## 1.6 Glossary of Icons

This User Manual may refer to all or some of the following icons.

Icons	Function
	Exit
	Add row
	Delete row
	Option List

### 1.6.1 **Related Documents**

You may refer the following manuals for more information

- Procedures User Manual
- Oracle Access Manager User Manual (not included with Oracle FLEXCUBE User Manuals)

---

## 2. Enabling Single Sign-on with Oracle Access Manager

### 2.1 Introduction

For the purpose of single sign-on FLEXCUBE UBS is qualified with Oracle Identity Management 11.1.1 (Fusion Middleware 11gR1) – specifically using the Access Manager component of Oracle Identity Management. This feature is available in the releases FC UBS V.UM 7.3.0.0.0.0 and onwards of FLEXCUBE UBS.

This document is expected to provide an understanding as to how single sign-on can be enabled for a FLEXCUBE UBS deployment using Oracle Fusion Middleware 11g.

In addition to providing a background to the various components of the deployment, this document also talks about Configuration in FLEXCUBE and Oracle Access Manager to enable single sign-on using Oracle Internet Directory as a LDAP server.

### 2.2 Background and Prerequisites

#### 2.2.1 Software Requirements

##### **Oracle Access Manager – OAM (11.1.1.5)**

- Access Server – 11.1.1.5
- Webtier Utilities 11.1.1.6
- Web Gate 11.1.1.5
- Http Server

##### **LDAP Directory Server**

Please make sure that the LDAP which has been used for Flexcube Single Signon deployment is certified to work with OAM.

List of few LDAP Directory servers supported as per OAM document (note – this is an indicative list. The conclusive list can be obtained from the Oracle Access Manager documentation. Though we have only use OID for our testing purposes):

- Oracle Internet Directory
- Active Directory
- ADAM
- ADSI
- Data Anywhere (Oracle Virtual Directory)
- IBM Directory Server
- NDS
- Sun Directory Server

##### **Web Logic(10.3.5)**

For the purpose of achieving single sign on for FCUBS in FMW 11gR1, it is necessary for the weblogic instance to have an explicit **Oracle HTTP server (OHS)**.

## 2.3 **Background of SSO related components**

### 2.3.1 **Oracle Access Manager (OAM)**

Oracle Access Manager consists of the Access System and the Identity System. The Access System secures applications by providing centralized authentication, authorization and auditing to enable single sign-on and secure access control across enterprise resources. The Identity System manages information about individuals, groups and organizations. It enables delegated administration of users, as well as self-registration interfaces with approval workflows. These systems integrate seamlessly.

The backend repository for the Access Manager is an LDAP-based directory service that can be a combination of a multiple directory servers, which is leveraged for two main purposes:

- As the store for policy, configuration and workflow related data, which is used and managed by the Access and Identity Systems
- As the identity store, containing the user, group and organization data that is managed through the Identity System and is used by the Access System to evaluate access policies.

### 2.3.2 **LDAP Directory Server**

To integrate Flexcube with OAM to achieve Single Sign-on feature, Flexcube's password policy management, like password syntax and password expiry parameters will no longer be handled by Flexcube. Instead, the password policy management can be delegated to the Directory Server. All password policy enforcements would be on the LDAP user id's password and NOT Flexcube application users' passwords.

### 2.3.3 **WebGate/AccessGate**

A WebGate is a Web server plug-in that is shipped out-of-the-box with Oracle Access Manager. The WebGate intercepts HTTP requests from users for Web resources and forwards it to the Access Server for authentication and authorization.

Whether you need a WebGate or an AccessGate depends on your use of the Oracle Access Manager Authentication provider. For instance, the:

Identity Asserter for Single Sign-On: Requires a separate WebGate and configuration profile for each application to define perimeter authentication. Ensure that the Access Management Service is On.

Authenticator or Oracle Web Services Manager: Requires a separate AccessGate and configuration profile for each application. Ensure that the Access Management Service is On.

### 2.3.4 **Identity Asserter**

Identity Asserter uses Oracle Access Manager Authentication services and also validates already-authenticated Oracle Access Manager Users through the ObSSOCookie and creates a WebLogic-authenticated session. It also provides single sign-on between WebGates and portals. We can get more details on Identity asserter at

[http://download.oracle.com/docs/cd/E12839\\_01/core.1111/e10043/osso.htm#CHDGCACF](http://download.oracle.com/docs/cd/E12839_01/core.1111/e10043/osso.htm#CHDGCACF)

**Note:** This document contains the configuration of Oracle Internet Directory as LDAP server and its configuration in weblogic. This document will not discuss the configuring and setting up of OAM and LDAP directory server of other LDAP servers. This will be provided by the corresponding Software provider.

## 2.4 Configuration

### 2.4.1 Pre-requisites

- The steps provided below assume that FLEXCUBE has already been deployed and is working (without single sign-on)
- The provided below steps assume that Oracle Access Manager and the LDAP server have been installed already and the requisite setup already done with respect to connecting the two along Weblogic's Identity Asserter.

## 2.5 Enabling SSL for Weblogic and OAM Console

### 2.5.1 Self-signed Certificate Creation:

To enable SSL mode, WebLogic requires a keystore which contains private and trusted certificates. We have to use the same version of JDK (which is used by Weblogic Domain), to create the keystore and certificates, otherwise it may lead to many difficulties (suggested by Oracle Support).

Keytool utility available in Java JDK will be used to create Keystore. In command prompt set PATH to the JDK\bin location. Follow the below steps to create keystore and self-signed certificates:

#### 2.5.1.1 Keystore Creation

```
keytool -genkey -keystore <keystore_name.jks> -alias <alias_name> -dname "CN=<hostname>,
OU=<Organization Unit>, O=<Organization>, L=<Location>, ST=<State>, C=<Country_Code>" -keyalg
<Key Algorithm> -sigalg <Signature Algorithm> -keysize <key size> -validity <Number of Days> -keypass
<Private key Password> -storepass <Store Password>
```

For example:

```
keytool -genkey -keystore AdminFlexcubeKeyStore.jks -alias FlexcubeCert -dname
"CN=ofss00001.in.oracle.com, OU=OFSS, O=OFSS, L=Chennai, ST=TN, C=IN" -keyalg "RSA" -sigalg
"SHA1withRSA" -keysize 2048 -validity 3650 -keypass Password@123 -storepass Password@123
```

**Note:** CN=ofss00001.in.oracle.com is the Host Name of the weblogic server

#### 2.5.1.2 Export private key as certificate

```
keytool -export -v -alias <alias_name> -file <export_certificate_file_name_with_location.cer> -keystore
<keystore_name.jks> > -keypass <Private key Password> -storepass <Store Password>
```

For example:

```
keytool -export -v -alias FlexcubeCert -file AdminFlexcubeCert.cer -keystore AdminFlexcubeKeyStore.jks
-keypass Password@123 -storepass Password@123
```

#### 2.5.1.3 Import as trusted certificate

```
keytool -import -v -trustcacerts -alias rootcacert -file <export_certificate_file_name_with_location.cer> -
keystore <keystore_name.jks> > -keypass <Private key Password> -storepass <Store Password>
```

For example:

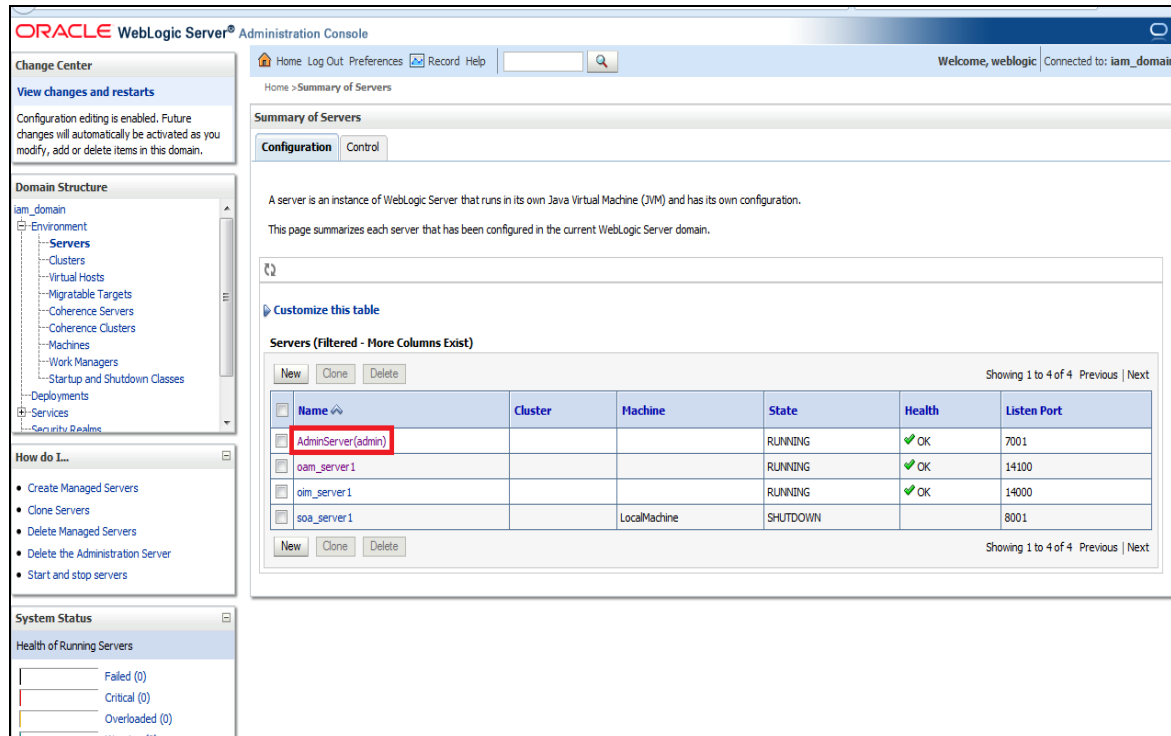
```
keytool -import -v -trustcacerts -alias rootcacert -file AdminFlexcubeCert.cer -keystore AdminFlexcubeKeyStore.jks -keypass Password@123 -storepass Password@123
```

References: Oracle Support Articles (Article ID 1281035.1, Article ID 1218695.1), in case of Certificates issued by the Trusted Authorities

## 2.5.2 Configuring Weblogic Console

After domain creation, follow the below steps to enable SSL in weblogic Admin server and OAM Server.

### 2.5.2.1 Select Admin Server to enable SSL options



The screenshot shows the Oracle WebLogic Server Administration Console. The left sidebar contains the 'Domain Structure' tree with 'iam\_domain' expanded, showing 'Servers' and 'Clusters'. The main area displays the 'Summary of Servers' page. A table lists the servers in the domain:

Name	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)			RUNNING	OK	7001
oam_server1			RUNNING	OK	14100
oim_server1			RUNNING	OK	14000
soa_server1		LocalMachine	SHUTDOWN		8001

#### 2.5.2.2 Follow the steps in General Tab as shown below:

- Select SSL Listen Port Enabled, Client Cert Proxy Enabled, Weblogic Plug-In Enabled
- Click on Save



**General** Cluster Services Keystores SSL Federation Services Deployment Migration Tuning Overload Health Monitoring Server Start Web Services

**Save**

Use this page to configure general features of this server such as default network communications.  
View JNDI Tree

<b>Name:</b>	AdminServer	An alphanumeric name for this server instance. <a href="#">More Info...</a>
<b>Machine:</b>	(None)	The WebLogic Server host computer (machine) on which this server is meant to run. <a href="#">More Info...</a>
<b>Cluster:</b>	(Standalone)	The cluster, or group of WebLogic Server instances, to which this server belongs. <a href="#">More Info...</a>
<b>Listen Address:</b>		The IP address or DNS name this server uses to listen for incoming connections. <a href="#">More Info...</a>
<input checked="" type="checkbox"/> <b>Listen Port Enabled</b>		Specifies whether this server can be reached through the default plain-text (non-SSL) listen port. <a href="#">More Info...</a>
<b>Listen Port:</b>	7001	The default TCP port that this server uses to listen for regular (non-SSL) incoming connections. <a href="#">More Info...</a>
<input checked="" type="checkbox"/> <b>SSL Listen Port Enabled</b>		Indicates whether the server can be reached through the default SSL listen port. <a href="#">More Info...</a>
<b>SSL Listen Port:</b>	7002	The TCP/IP port at which this server listens for SSL connection requests. <a href="#">More Info...</a>
<input checked="" type="checkbox"/> <b>Client Cert Proxy Enabled</b>		Specifies whether the HttpClusterServlet proxies the client certificate in a special header. <a href="#">More Info...</a>
<b>Java Compiler:</b>	javac	The Java compiler to use for all applications hosted on this server that need to compile Java code. <a href="#">More Info...</a>
<b>Diagnostic Volume:</b>	Low	Specifies the volume of diagnostic data that is automatically produced by WebLogic Server at run time. Note that the WLDF diagnostic volume setting does not affect explicitly configured diagnostic modules. For example, this controls the volume of events generated for JRockit Flight Recorder. <a href="#">More Info...</a>

**Advanced**

**Virtual Machine Name:** iam\_domain\_AdminSe  
When WLS is running on JRockit, this specifies the name of the virtual machine running this server. [More Info...](#)

☒ **WebLogic Plug-In Enabled**  
Specifies whether this server uses the proprietary WL-Proxy-Client-IP header, which is recommended if the server instance will receive requests from a proxy plug-in. [More Info...](#)

### 2.5.2.3 Follow the steps in Keystores Tab as shown below:

- Click Change and select Keystores as **Custom Identity and Custom Trust**
- Click on Save
- Note: Keystores as **Custom Identity and Custom Trust** is as suggested by Oracle Support Team

**ORACLE WebLogic Server® Administration Console**

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: iam\_domain

Home > Summary of Servers > AdminServer

**Settings for AdminServer**

Configuration Protocols Logging Debug Monitoring Control Deployments Services Security Notes

**General Cluster Services Keystores SSL Federation Services Deployment Migration Tuning Overload Health Monitoring Server Start Web Services**

**Save Cancel**

Keystores ensure the secure storage and management of private keys and trusted certificate authorities (CAs). This page lets you view and define various keystore configurations. These settings help you to manage the security of message transmissions.

**Keystores:** Demo Identity and Demo Trust  
Custom Identity and Command Line Trust  
**Custom Identity and Custom Trust**  
Custom Identity and Java Standard Trust  
Demo Identity and Demo Trust

Which configuration rules should be used for finding the server's identity and trust keystores? [More Info...](#)

**Save Cancel**

WebLogic Server Version: 10.3.5.0  
Copyright © 1996, 2010, Oracle and/or its affiliates. All rights reserved.  
Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

#### 2.5.2.4 Follow the steps in Keystores Tab as shown below:

- Enter Custom Identity Keystore and Custom Trust Keystore as same as the Keystore Name created in step 3.2.1.1 with full path.
- Enter Custom Identity Keystore Type and Custom Trust Keystore Type as jks.
- Enter Custom Identity Keystore Passphrase, Confirm Custom Identity Keystore Passphrase, Custom Trust Keystore Passphrase and Confirm Custom Trust Keystore Passphrase as same as the Store Password entered in step 3.2.1.1.
- Click on Save.

ORACLE WebLogic Server® Administration Console

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: iam\_domain

Home > Summary of Servers > AdminServer

Settings for AdminServer

Configuration Protocols Logging Debug Monitoring Control Deployments Services Security Notes

General Cluster Services **Keystores** SSL Federation Services Deployment Migration Tuning Overload Health Monitoring Server Start Web Services

**Save**

Keystores ensure the secure storage and management of private keys and trusted certificate authorities (CAs). This page lets you view and define various keystore configurations. These settings help you to manage the security of message transmissions.

Keystores: Custom Identity and Custom Trust [Change](#) Which configuration rules should be used for finding the server's identity and trust keystores? [More Info...](#)

— Identity —

Custom Identity Keystore: nFlexcubeKeyStore.jks [/scratch/app/fmw115/oam1115/BaseKeyStore/AdminFlexcubeKeyStore.jks](#)

Custom Identity Keystore Type: jks The type of the keystore. Generally, this is JKS. [More Info...](#)

Custom Identity Keystore Passphrase: ..... The encrypted custom identity keystore's passphrase. If empty or null, then the keystore will be opened without a passphrase. [More Info...](#)

Confirm Custom Identity Keystore Passphrase: .....

— Trust —

Custom Trust Keystore: nFlexcubeKeyStore.jks [/scratch/app/fmw115/oam1115/BaseKeyStore/AdminFlexcubeKeyStore.jks](#)

Custom Trust Keystore Type: jks The type of the keystore. Generally, this is JKS. [More Info...](#)

Custom Trust Keystore Passphrase: ..... The custom trust keystore's passphrase. If empty or null, then the keystore will be opened without a passphrase. [More Info...](#)

Confirm Custom Trust Keystore Passphrase: .....

**Save**

#### 2.5.2.5 Follow the steps in SSL Tab as shown below:

- Enter Private Key Alias as same as the alias name entered in step 3.2.1.1.
- Enter Private Key Passphrase and Confirm Private Key Passphrase as same as the Private Key Password entered in step 3.2.1.1.
- Change the Hostname Verification to None.
- Click on Save.

**ORACLE WebLogic Server® Administration Console**

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: iam\_domain

Home > Summary of Servers > AdminServer

**Settings for AdminServer**

Configuration Protocols Logging Debug Monitoring Control Deployments Services Security Notes

General Cluster Services Keystores **SSL** Federation Services Deployment Migration Tuning Overload Health Monitoring Server Start Web Services

**Save**

This page lets you view and define various Secure Sockets Layer (SSL) settings for this server instance. These settings help you to manage the security of message transmissions.

**Identity and Trust Locations:** Keystores Change Indicates where SSL should find the server's identity (certificate and private key) as well as the server's trust (trusted CAs). [More Info...](#)

**Identity**

**Private Key Location:** from Custom Identity Keystore The keystore attribute that defines the location of the private key file. [More Info...](#)

**Private Key Alias:** selfcert The keystore attribute that defines the string alias used to store and retrieve the server's private key. [More Info...](#)

**Private Key Passphrase:** ..... The keystore attribute that defines the passphrase used to retrieve the server's private key. [More Info...](#)

**Confirm Private Key Passphrase:** ..... The keystore attribute that defines the passphrase used to retrieve the server's private key. [More Info...](#)

**Certificate Location:** from Custom Identity Keystore The keystore attribute that defines the location of the trusted certificate. [More Info...](#)

**Trust**

**Trusted Certificate Authorities:** from Custom Trust Keystore The keystore attribute that defines the location of the certificate authorities. [More Info...](#)

**Advanced**

**Hostname Verification:** None Custom Hostname Verifier RFA Hostname Verifier Specifies whether to ignore the installed implementation of the weblogic.security.SSL.HostnameVerifier interface (when this server is acting as a client to another application server). [More Info...](#)

**Custom Hostname Verifier:** None The name of the class that implements the weblogic.security.SSL.HostnameVerifier interface. [More Info...](#)

**Export Key Lifespan:** 500 Indicates the number of times WebLogic Server can use an exportable key between a domestic server and an exportable client before generating a new key. The more secure you want WebLogic Server to be, the fewer times the key should be used before generating a new key. [More Info...](#)

### 2.5.2.6 Select OAM Server to enable SSL options and Repeat the steps performed in 2.2.2.2 to 2.2.2.5

**ORACLE WebLogic Server® Administration Console**

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: iam\_domain

Home > Summary of Servers > AdminServer > Summary of Servers

**Summary of Servers**

Configuration Control

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration.

This page summarizes each server that has been configured in the current WebLogic Server domain.

**Customize this table**

**Servers (Filtered - More Columns Exist)**

New Clone Delete Showing 1 to 4 of 4 Previous Next

Name	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)			RUNNING	OK	7001
<b>oam_server1</b>			RUNNING	OK	14100
oim_server1			RUNNING	OK	14000
soa_server1		LocalMachine	SHUTDOWN		8001

New Clone Delete Showing 1 to 4 of 4 Previous Next

- Now the admin server and oam servers are SSL enabled. Restart both the servers.

## 2.6 **Configuring SSO in OAM Console**

After installing OAM, Webtier Utilities and Webgate, extend the weblogic domain to create OAM server.

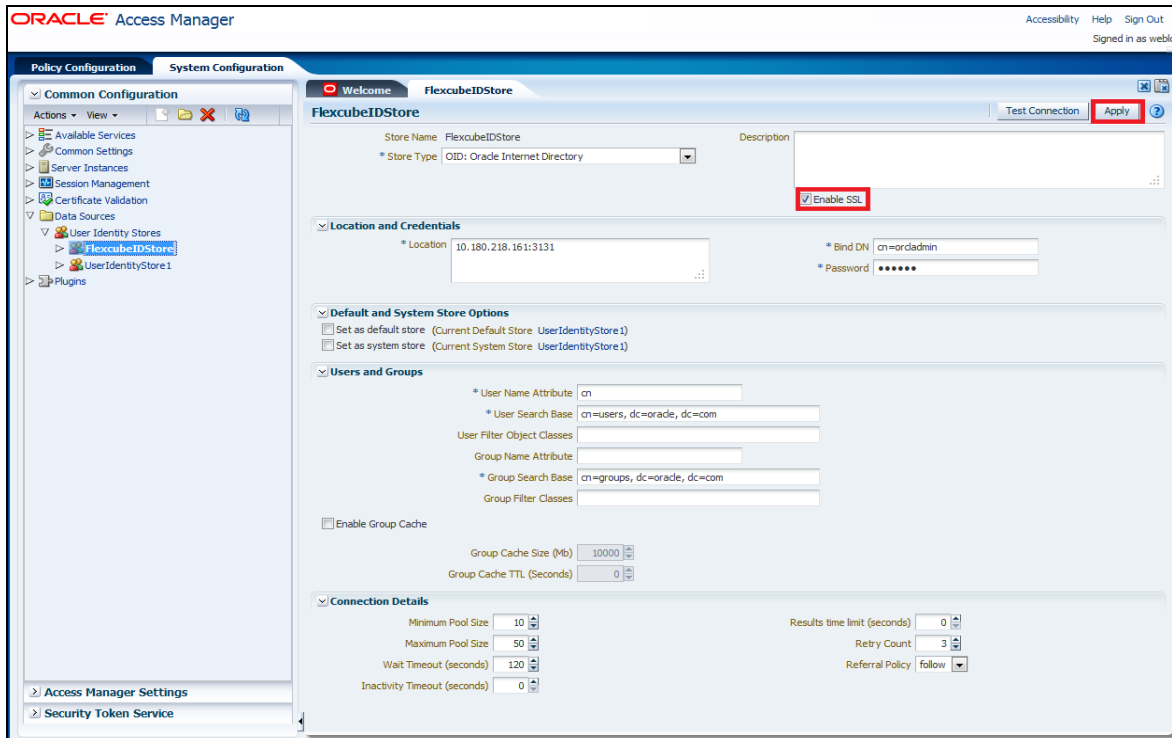
Follow the post installation scripts deployWebGate and EditHttpConf as provided in [http://docs.oracle.com/cd/E17904\\_01/install.1111/e12002/webgate004.htm](http://docs.oracle.com/cd/E17904_01/install.1111/e12002/webgate004.htm)

### 2.6.1 **Identity Store Creation**

#### 2.6.1.1 **To create new User Identity Store, Login to OAM Console and navigate to System Configuration>>Common configuration>>Data Sources>> User Identity Store**

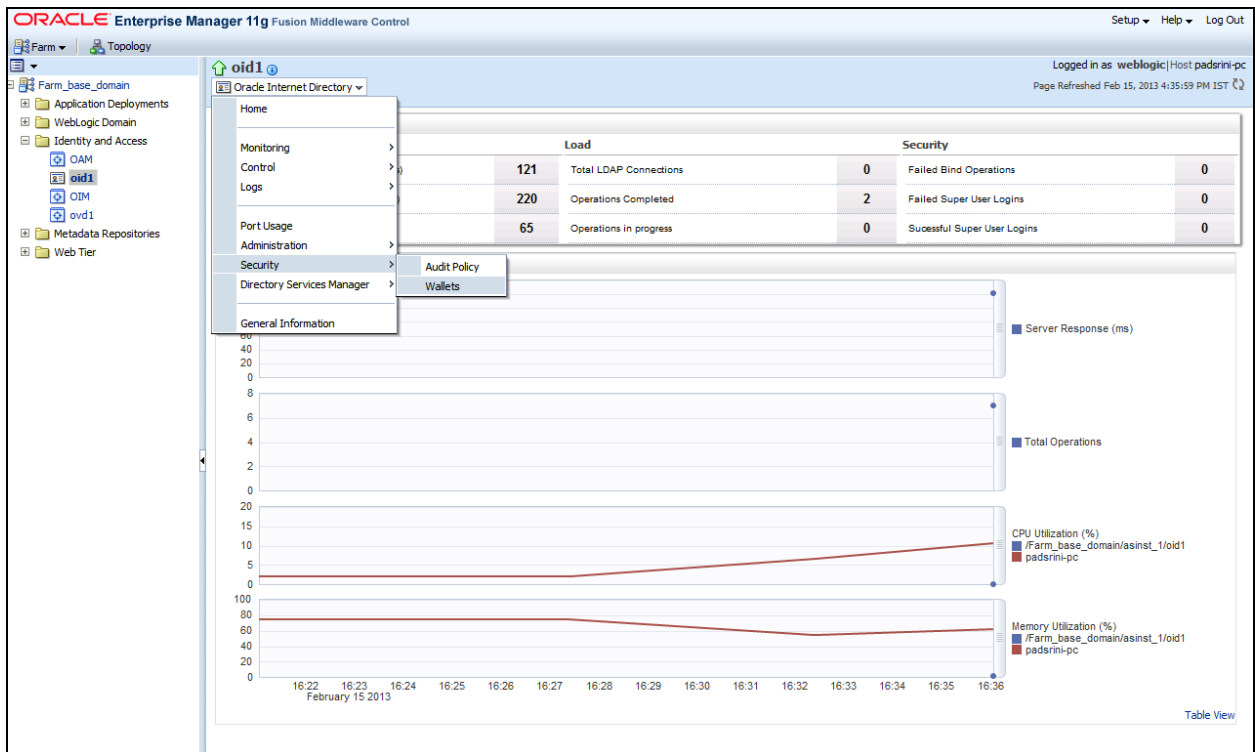
- Click New icon to create new Identity Store.
- Input below information in the new User Identity Store.
  - Choose Store Type as Oracle Internet Directory.
  - Location: LDAP server Host name and Port Number in <HOSTNAME>:PORT format
  - Select Enable SSL check box
  - Bind DN: User name to connect the LDAP Server
  - Password: Password to connect the LDAP Server
  - User Name Attribute: The attribute created in LDAP, which will be the User Name for the other application (here it will be treated as the FCUBS Username)
  - User Search Base: The container of the User Name in the LDAP server.
  - Group Search Base: The container of the Group Name in the LDAP server.
- Click on **Apply**.

**Note:** User Identity Store will be created only if valid LDAP Parameters are passed.

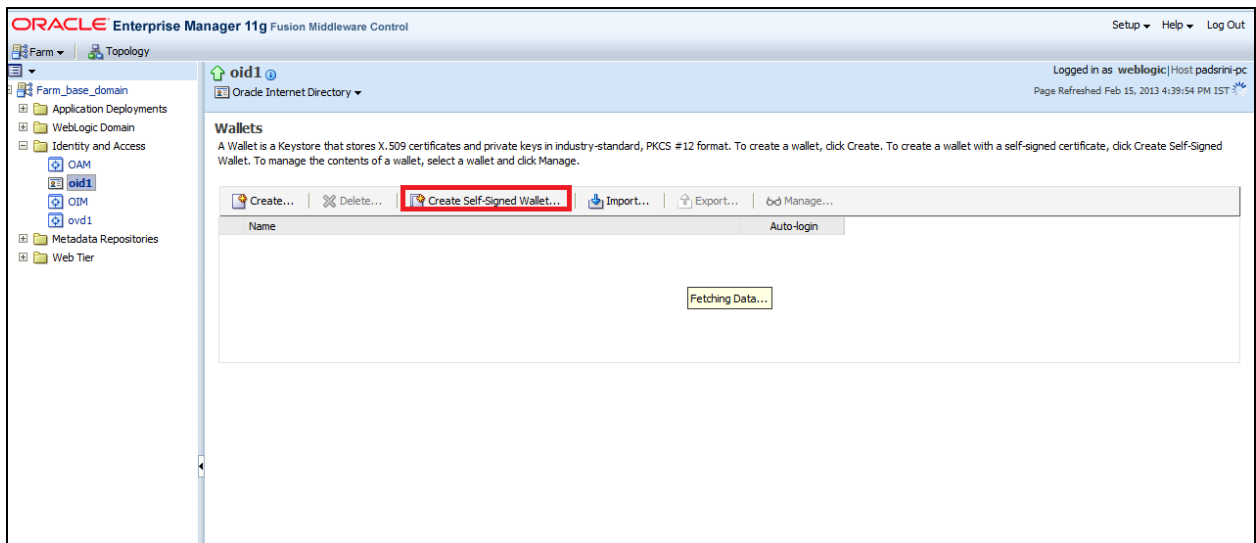


To enable SSL for OID LDAP Server refer, follow the below steps.

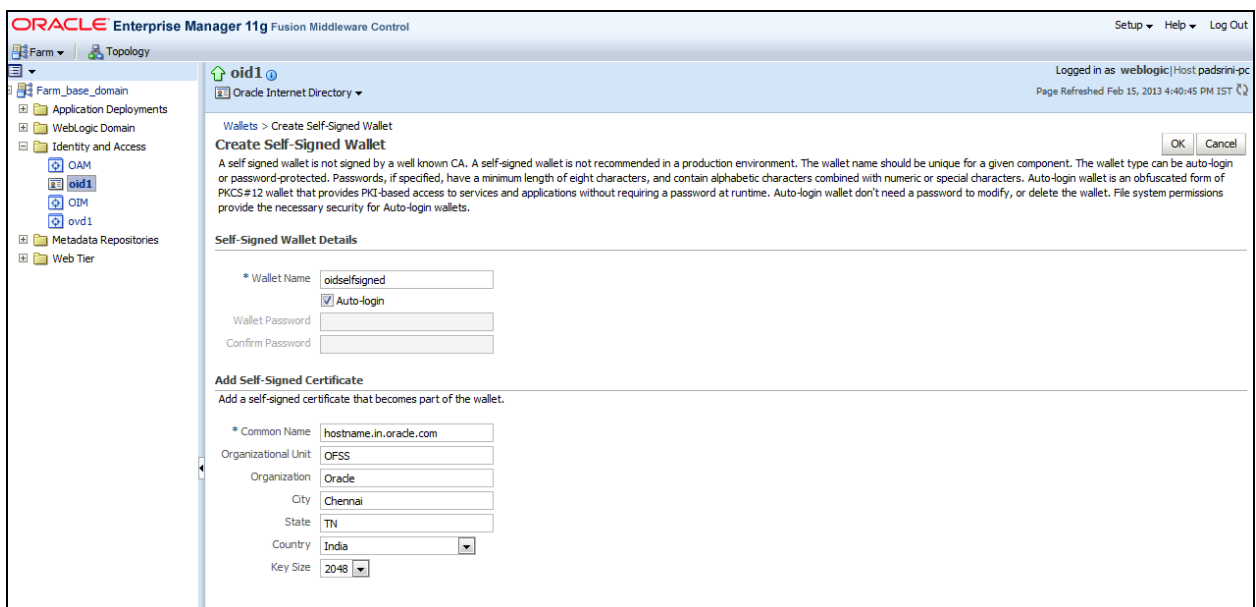
1. Login to the Enterprise Manager Console of the domain, in which Oracle Internet Directory is associated



2. Click on **Create Self-Signed Wallet**

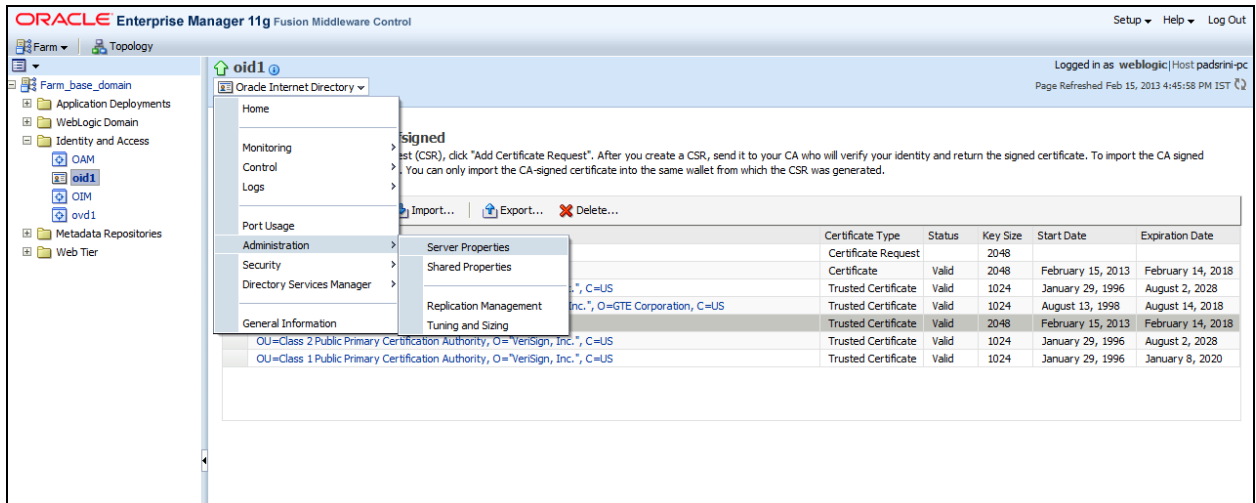


3. Enter the Details as below & Click on **OK**

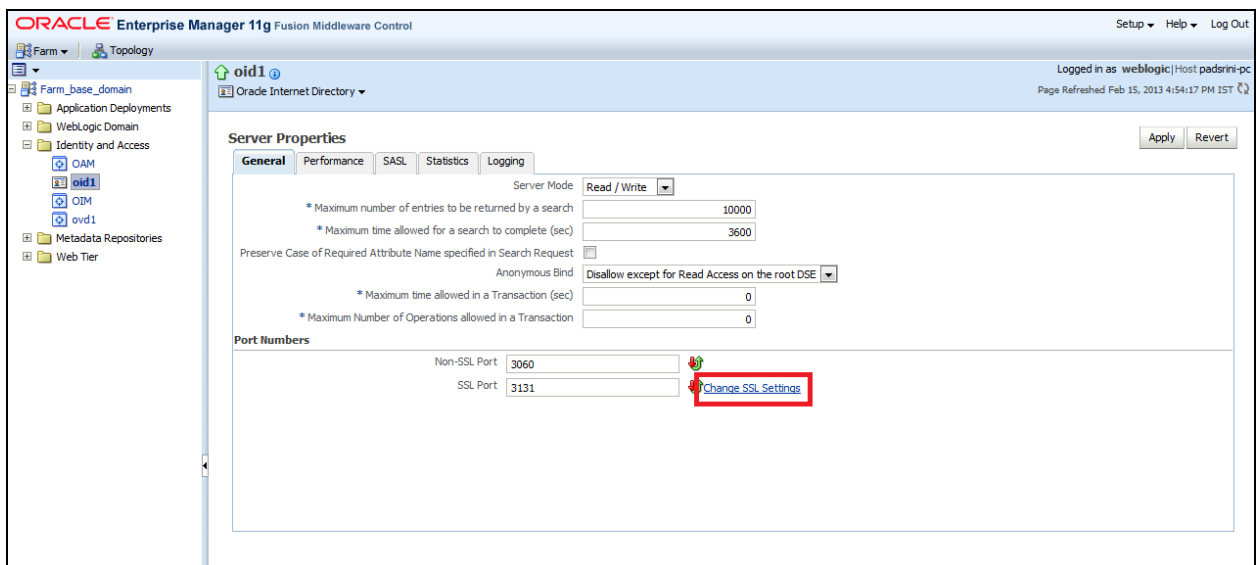


4. Click on **Manage...**



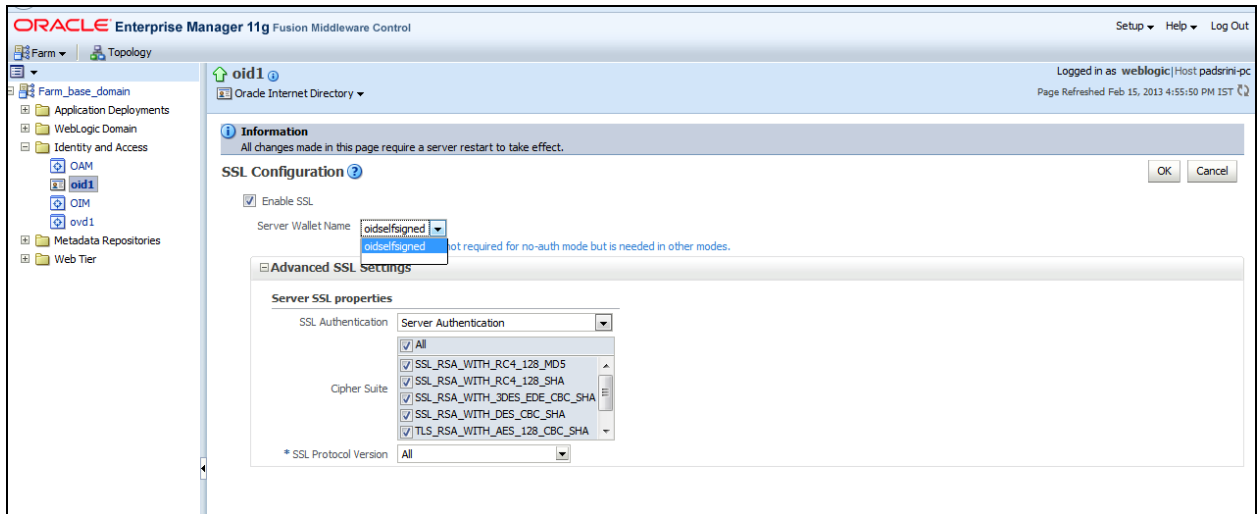


8. Click on Change SSL Settings

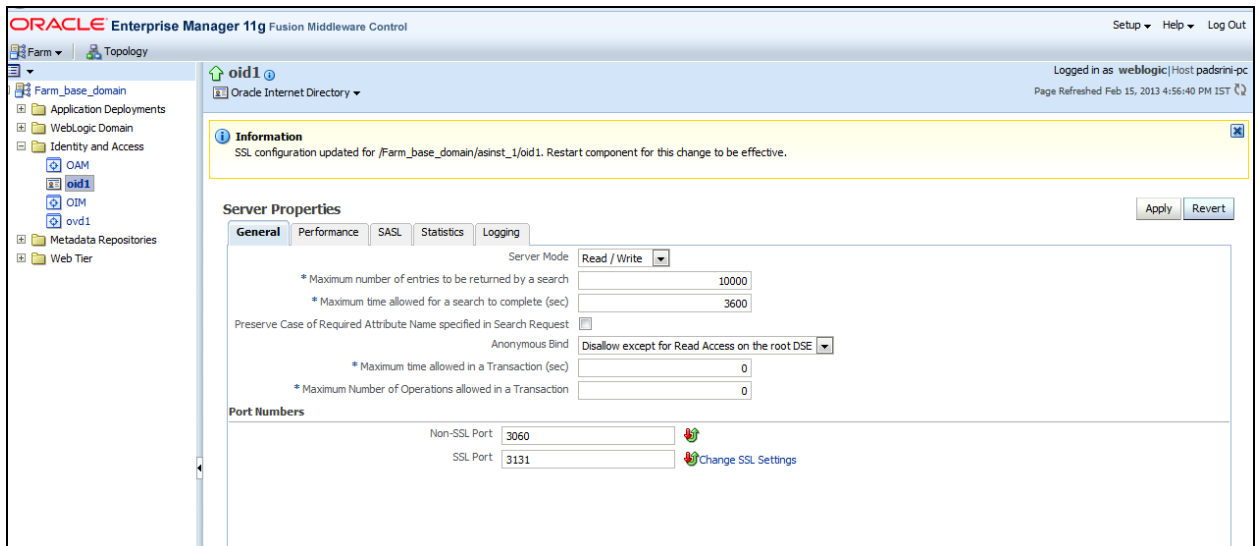


9. Select the Wallet, SSL Authentication as Server Authentication, Cipher Suite, SSL Protocol Version as below & Click on OK





10. Click on Apply.



## 11. Import LDAP Server SSL Certificate into OAM Server

We have to import the LDAP – Server certificate file into OAM server's `JAVA_HOME/jre/lib/security/cacerts`. Default Password is **"changeit"**

```
keytool -import -v -trustcacerts -alias ldapcert -file ldap_server_certificate.cer -keystore
JAVA_HOME/jre/lib/security/cacerts -storepass changeit
```

Restart Both OID & OAM Server.

## 12. Import LDAP Server SSL Certificate into OIM Server

Import the Exported Certificate into `wlserver_10.3/server/lib/DemoTrust.jks` of OIM Server Domain using the below command [ Store Password is **DemoTrustKeyStorePassPhrase** ]

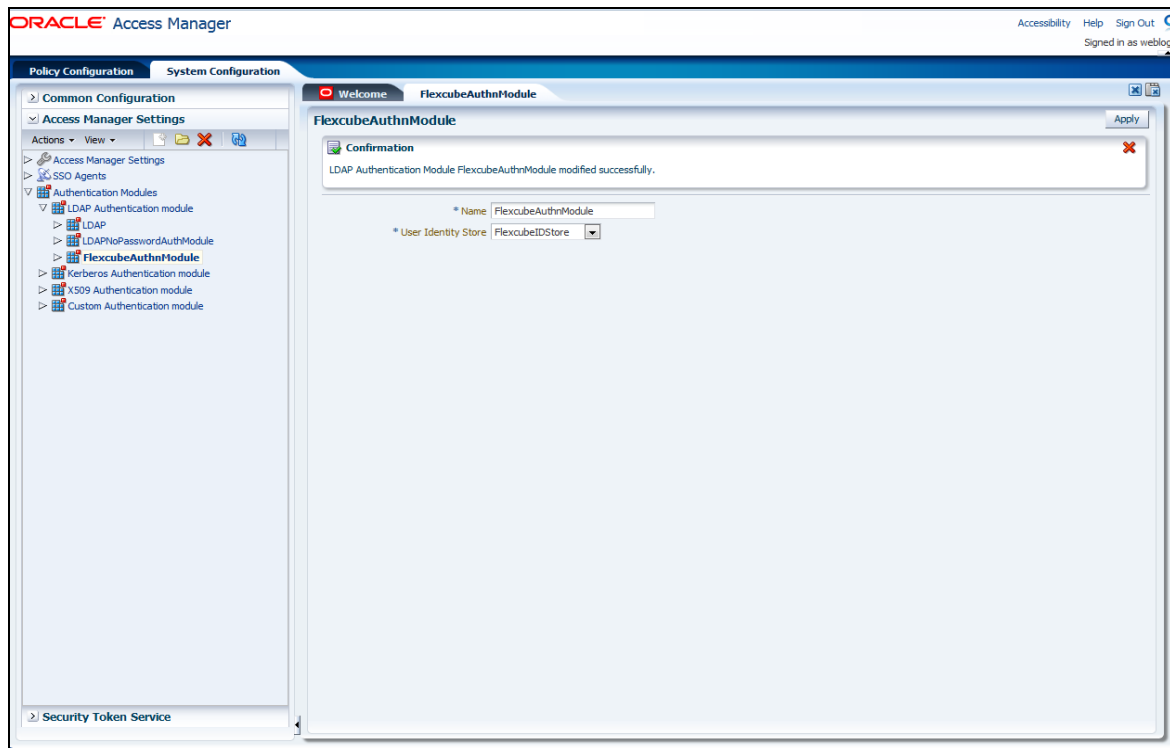
```
keytool -import -keystore MW_HOME/wlserver_10.3/server/lib/DemoTrust.jks -
file /home/testoc4j/OIM/globalv.crt -storepass DemoTrustKeyStorePassPhrase
```

Restart Both OID & OIM Server.

## 2.6.2 Creating Authentication Module

Navigate to **System Configuration >> Access Manager Settings >> Authentication Modules >> LDAP Authentication Module**

Click New Button to create new Authentication Module. Input the Name of the authentication module and choose the User Identity Store we created in step 1.

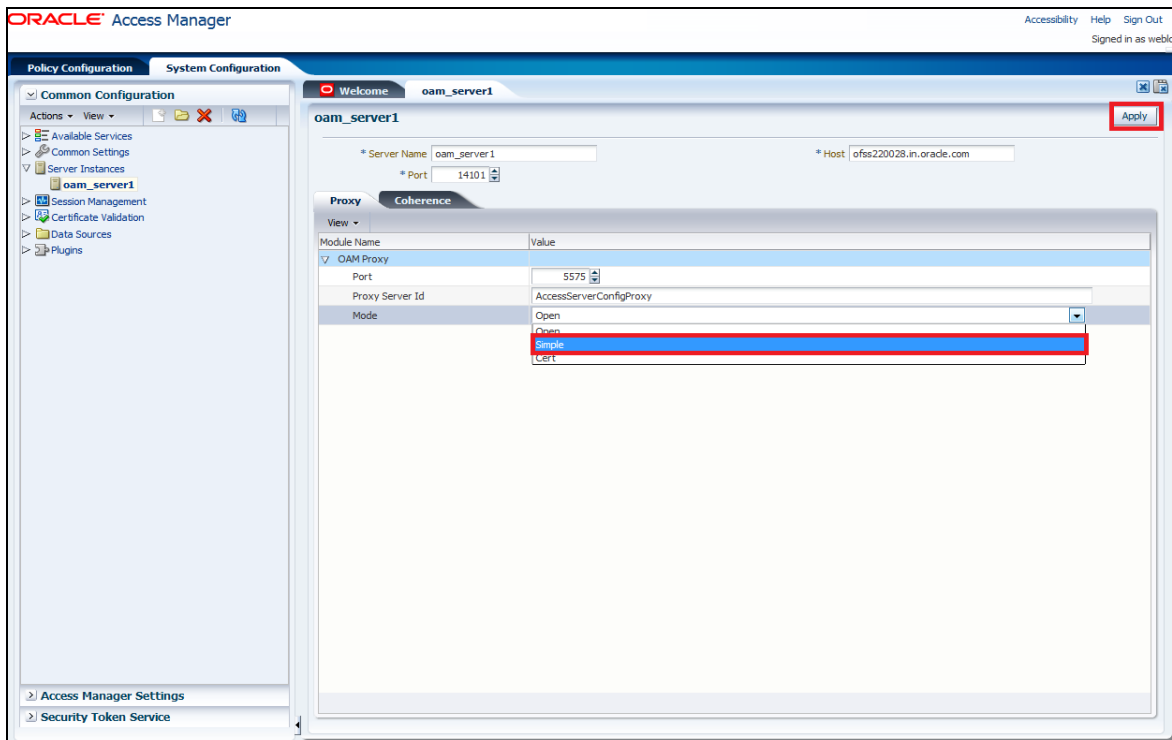


## 2.6.3 Creating OAM 11g Webgate

Navigate to **System Configuration→Common Configuration→Server Instances→ oam\_server1**

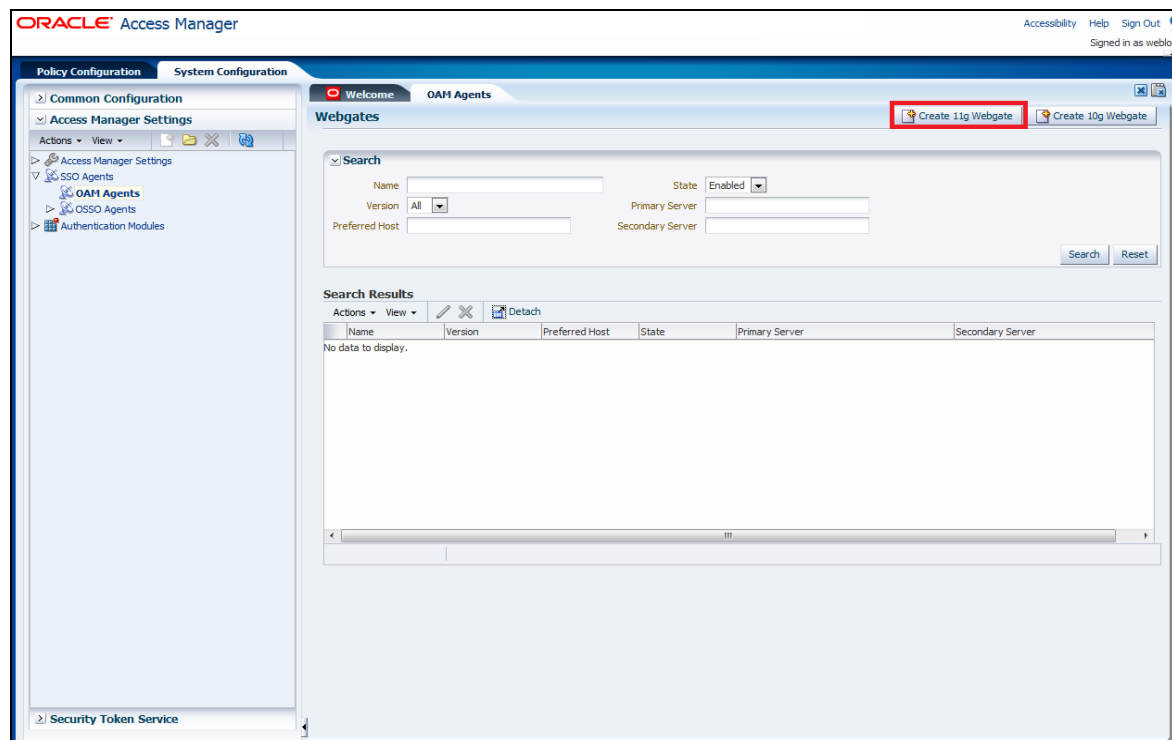
Change the Mode under Proxy Tab to Simple.

Click on Apply.



Navigate to **System Configuration>>Access Manager Settings>>SSO Agents>>OAM Agents**.

Click on Create 11g Webgate.



Enter the Custom Webgate Name in **Name**

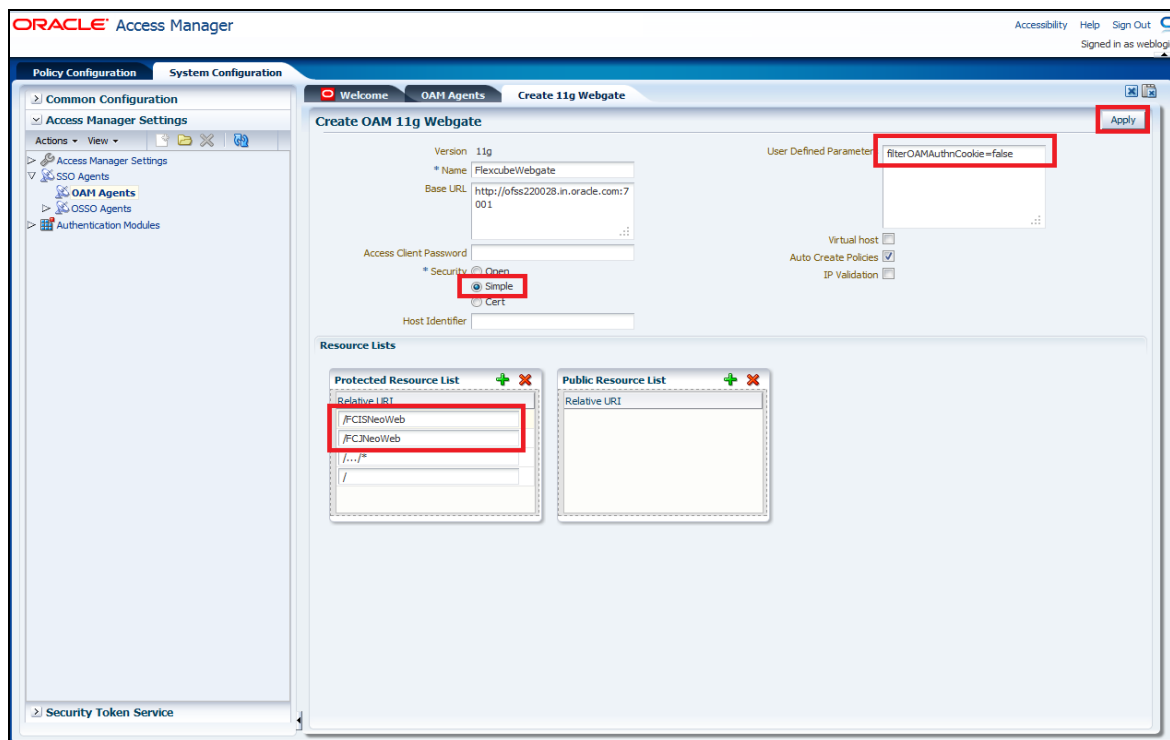
Enter the **Base URL** as in Weblogic Server's non-ssl URL

Select **Security** as **Simple**

Add the application context root under **Protected Resource List**, which we have to enable SSO

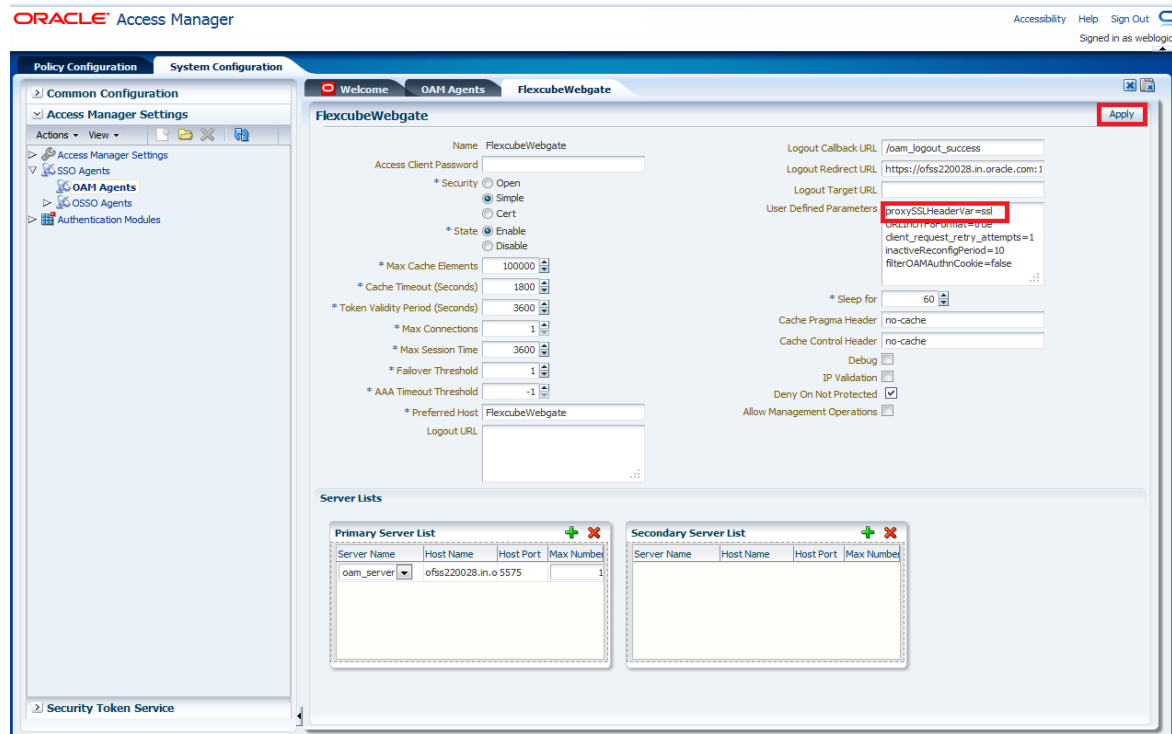
Add **filterOAMAuthnCookie=false** in **User Defined Parameters**

Click on **Apply**.



Once the OAM 11g Webgate created, Change the **proxySSLHeaderVar=IS\_SSL** to **proxySSLHeaderVar=ssl** parameter along with other parameters in User Defined Parameters.

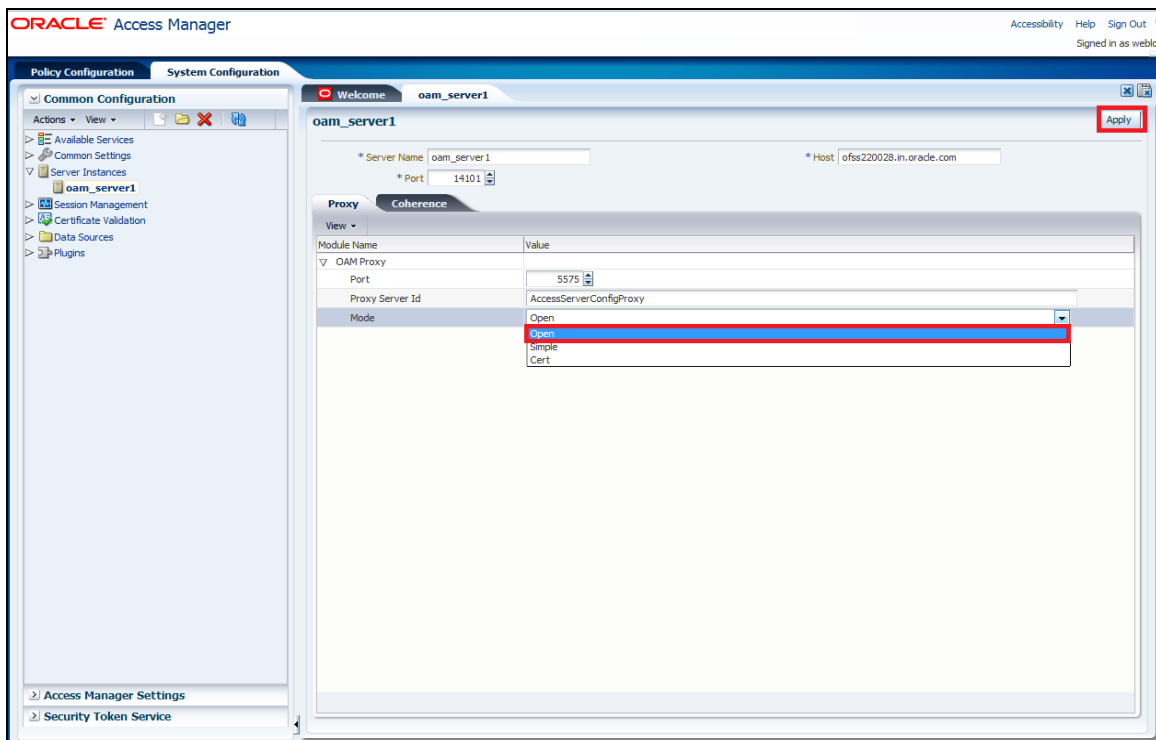
Click on **Apply**.



Navigate to **System Configuration**→**Common Configuration**→**Server Instances**→ **oam\_server1**

Change the Mode under **Proxy Tab** to Open.

Click on **Apply**.



## 2.6.4 **Post OAM Webgate 11g Creation Steps**

Perform the following steps to copy the artifacts to the Webgate installation directory:

### 2.6.4.1 **On the Oracle Access Manager Console host, locate the OAM Agent folder**

<DOMAIN\_HOME>/output/\$Agent\_Name

Copy the below files to <ORACLE\_MIDDLEWARE>/<ORACLE\_WIBTIER\_HOME> /instances/instance1/  
config/OHS/ohs1/webgate/config/

ObAccessClient.xml

password.xml

cwallet.sso

And copy remaining below files to <ORACLE\_MIDDLEWARE>/<ORACLE\_WIBTIER\_HOME>  
/instances/instance1/ config/OHS/ohs1/webgate/config/simple

aaa\_key.pem

aaa\_cert.pem

### 2.6.4.2 **Creating Authentication Scheme**

To create Authentication Scheme navigate to Policy Configuration >> Authentication Schemes

Click on Create button to create new Authentication Scheme.

Name : Any name to identify Authentication Scheme

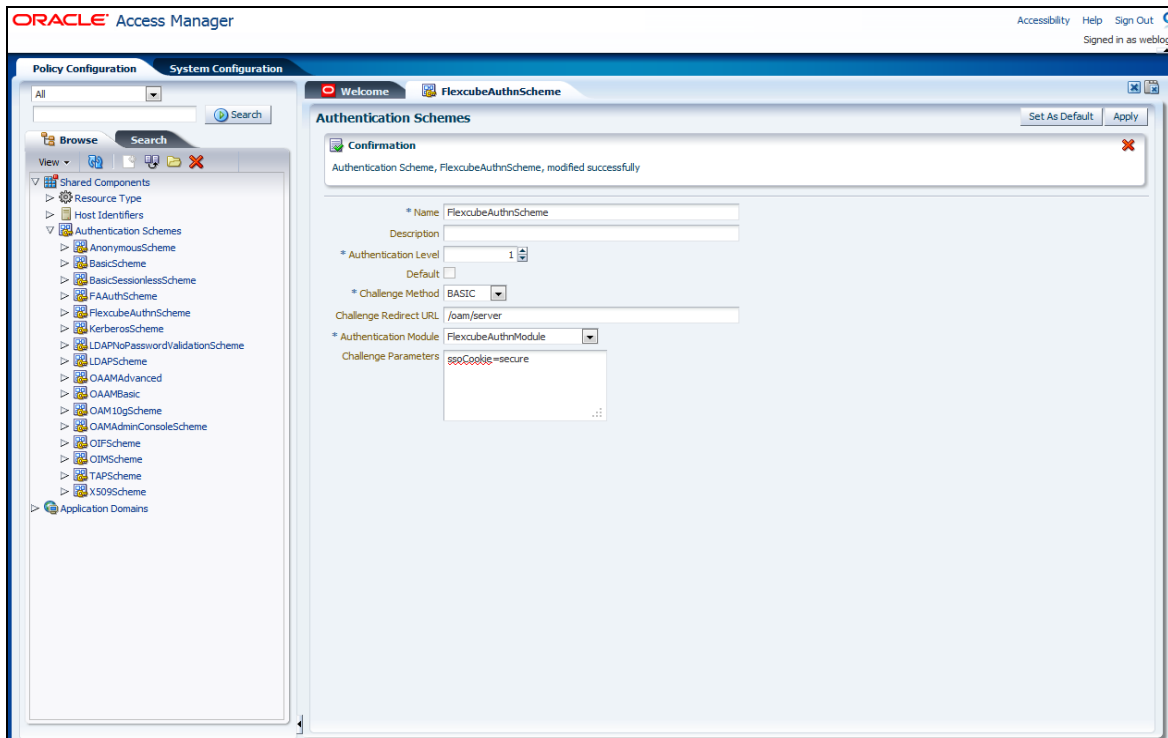
Authentication Level : 1

Challenge Method : BASIC

Challenge Redirect URL : /oam/server

Authentication Module : Choose the authentication module created in step 2.

Challenge Parameters : ssoCookie=secure



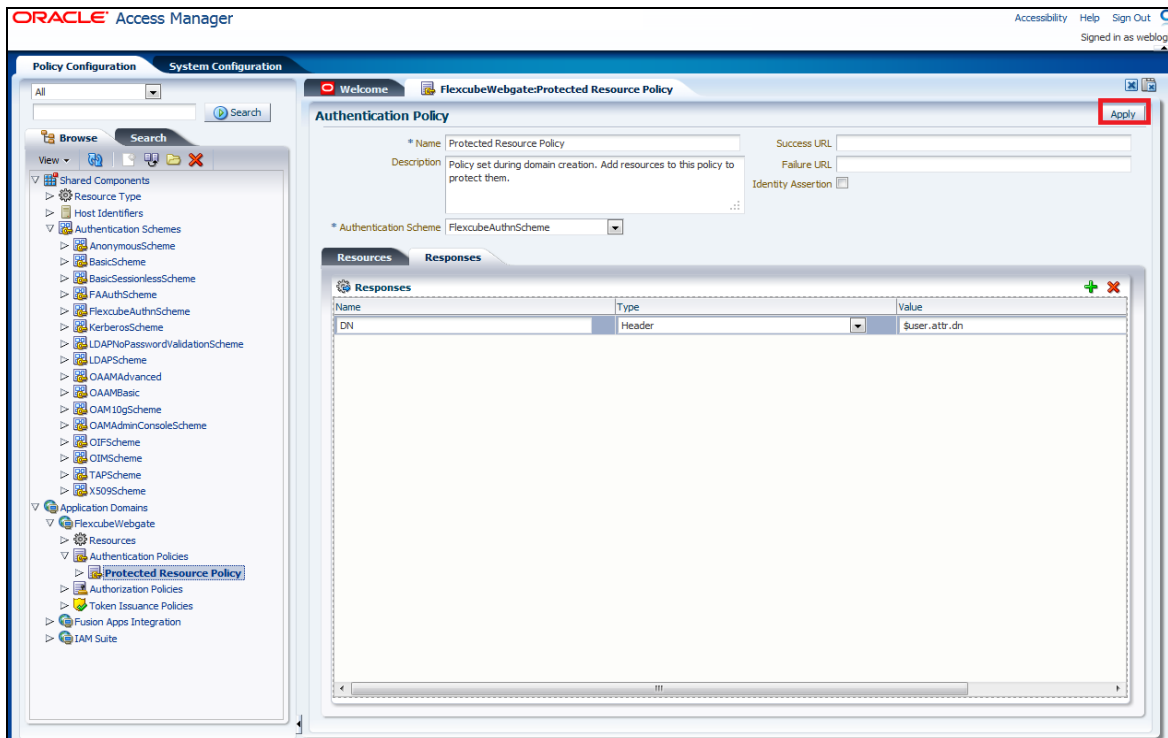
If it is a basic authentication scheme, we need to add the 'enforce-valid-basic-auth-credentials' tag to the config.xml file located under <weblogic deployment path>/user\_projects/domains/<MyDomain>/config/. The tag must be inserted within the <security-configuration> tag as follows: [Just above </security-configuration> tag]

```
<enforce-valid-basic-auth-credentials>false</enforce-valid-basic-auth-credentials>
```

### 2.6.4.3 Application Domains Changes

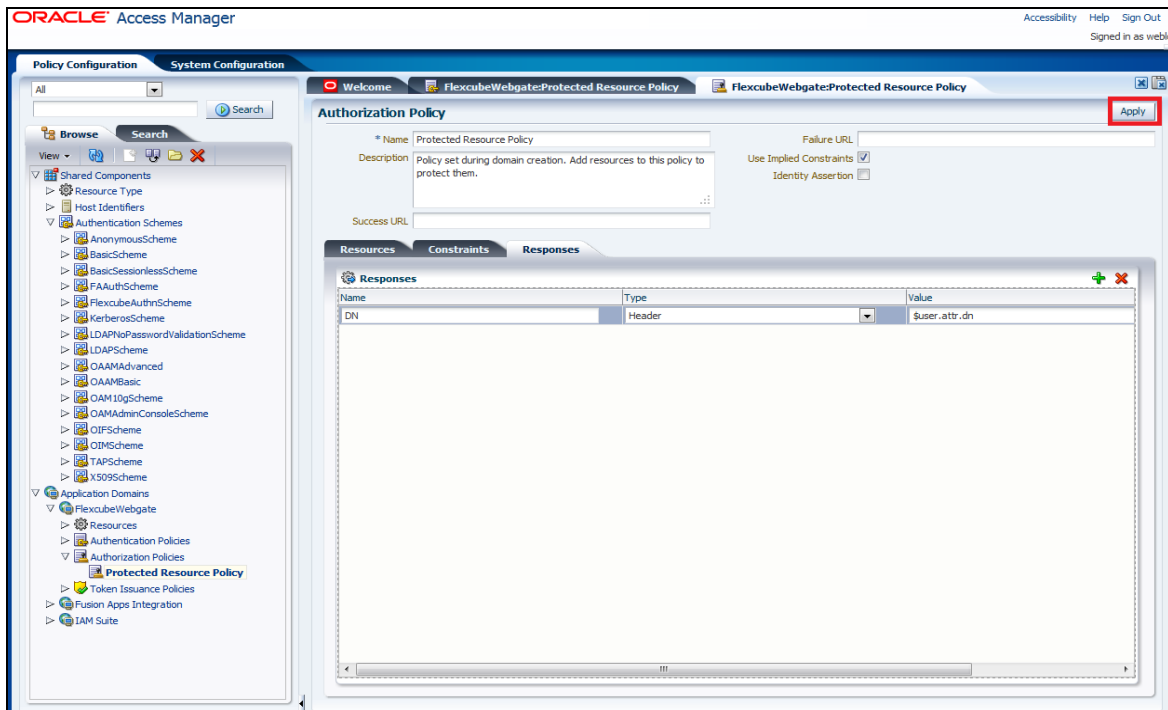
Navigate to **Policy Configuration >> Application Domains >> [Webgate agent name] >> Authentication Policies>>Protected Resource Policy.**

- Click on Responses Tab
- Choose the Authentication Scheme created in step 5.
- Add a Response as: Name : DN Type : Header Value : \$user.attr.dn
- Click on Apply.



Navigate to **Policy Configuration >> Application Domains >> [Webgate agent name] >> Authorization Policies>>Protected Resource Policy.**

- Click on Responses Tab
- Add a Response as: Name : DN Type : Header Value : \$user.attr.dn
- Click on Apply.





#### **2.6.4.4 Add the Application Certificates to Oracle HTTP Server to work with SSL mode.**

Use the ORAPKI tool to import the Flexcube and OAM Server certificates to Oracle HTTP Server. Add <Oracle\_MIDDLEWARE>/oracle\_common/bin to PATH environment variable and also set JAVA\_HOME environment variable. Execute the below command in the command line.

```
orapki wallet add -wallet  
<Oracle_MIDDLEWARE>/<ORACLE_WEBTIER_HOME>/instances/instance1/config/OHS/ohs1/keystore  
s/default -trusted_cert -cert <export_certificate_file_name_with_location.cer> -auto_login_only
```

Note: Certificate has to be imported into OHS Wallet

#### **2.6.4.5 Configuring mod\_wl\_ohs for Oracle HTTP server Routing**

To enable the Oracle HTTP Server instances to route to applications deployed on the Oracle Weblogic Server, add the directive shown below to the mod\_wl\_ohs.conf file available in

<ORACLE\_MIDDLEWARE> /<ORACLE\_WEBTIER\_HOME>/instances/instance1/config/OHS/ohs1.

```
<Location /FCJNeoWeb>  
    SetHandler weblogic-handler  
    WebLogicHost ofss00002.in.oracle.com  
    WeblogicPort 7002  
    WLProxySSL ON  
    SecureProxy ON  
    WLSSLWallet  
    "<ORACLE_MIDDLEWARE>/<ORACLE_WEBTIER_HOME>/instances/instance1/config/OHS/ohs  
    1/keystores/default"  
</Location>
```

Note: in the above example, ofss00002.in.oracle.com is the server name where the Flexcube Application deployed, 7002 is the SSL port and FCJNeoWeb is the context root of the FLEXCUBE application

#### **2.6.4.6 Checking the Webgate 11g Agent Creation**

After configuration of webgate 11g agent launch the URL

https://<hostname>:<ohs\_Port>/ohs/modules/webgate.cgi?progid=1 to verify whether the webgate configuration is fine. If the URL launches a screen as below then the webgate configuration is working fine.

Access Server	Connection State	Created	Installation Directory	Num Of Threads	Directory Information
ofss220028.in.oracle.com:5575, 1	Up	Friday, January 11, 2013 16:18:27			

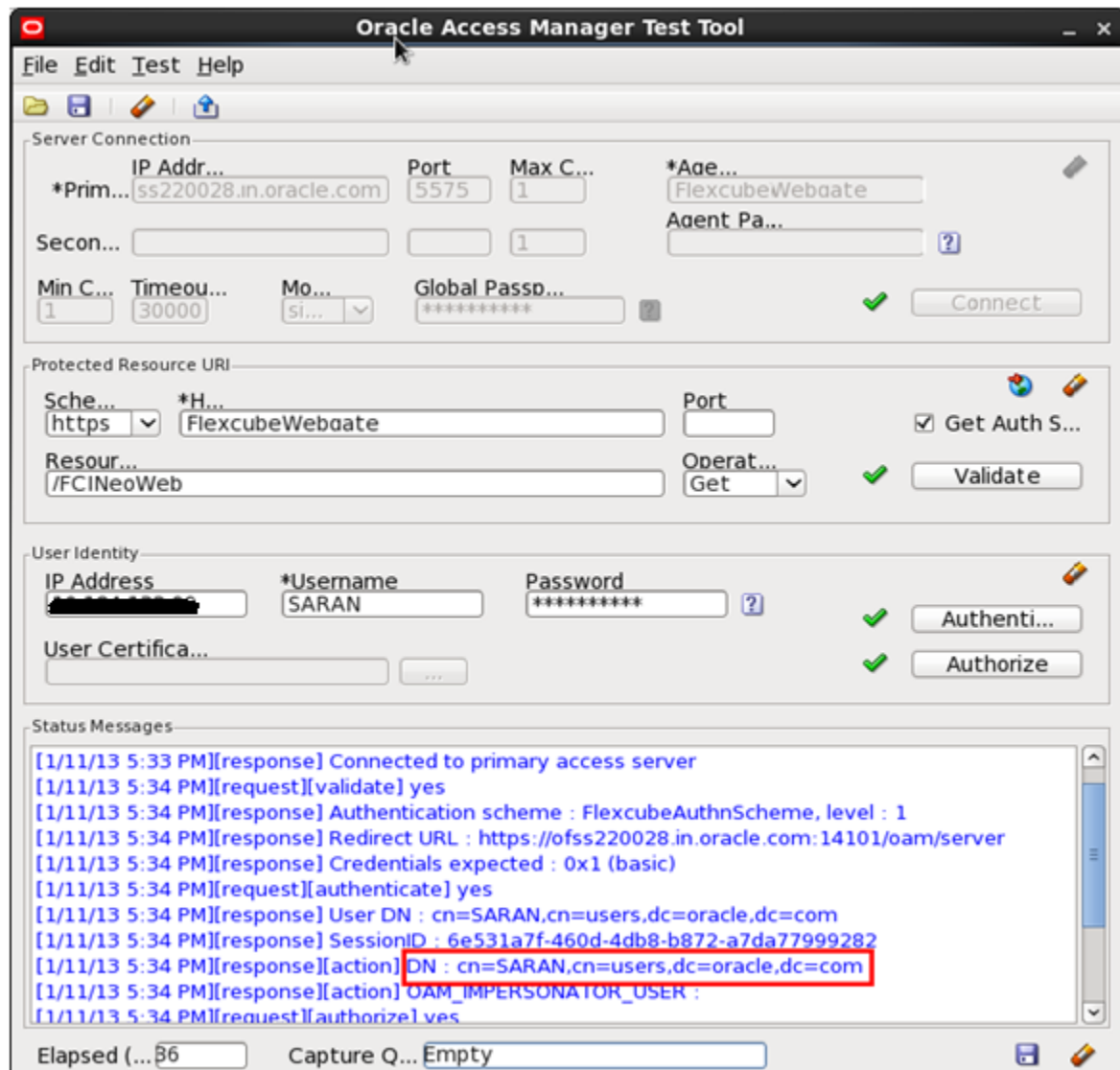
Cache Name	State	Max Elems	Curr Elems	Timeout (seconds)	Cache Stats (Hits:Misses:Expired:Flushed)	Memory Footprint (bytes)
Resource to Authentication Scheme	active	100000	100	1800	6451:273:61:0	59750
Authentication Scheme	active	25	1	1800	15012:34:33:0	802
Resource to Authorization Policy	active	100000	100	1800	381:127:27:0	43200
Authorization Result	active	1000	5	15	372:9:3:0	10845

#### 2.6.4.7 Using OAM Test Tool (This step is not mandatory)

There is a test tool provided in OAM software which helps us to check the response parameter values. The test tool is available in <OAM Install Dir>\oam\server\tester.

For eg. D:\weblogic\Middleware\Oracle\_IDM1\oam\server\tester

Use **java -jar oamtest.jar** to launch the OAM test tool.



## 2.7 First launch of FLEXCUBE after installation

After installing FLEXCUBE and while launching it for first time, the normal FCUBS login screen with userid and password will appear, this is because when installing the 'sso installed' parameter will be set to 'N'.

### 2.7.1 Bank Parameter maintenance

To enable SSO in FLEXCUBE, login into the application and enable "SSO Enabled" Check box in "Bank Maintenance [\[SMD BANKP\]](#)" screen.

**Bank Parameters Maintenance**

Bank Code \* 000      Customer Name BANK FUTURA

Head Office Branch      Description BANK FUTURA

Code \* 000

**Financial Preferences**    **General Preferences**

**Format Masks**      **Year End Profit and Loss**

CIF Mask bbbnnnnnn      General Ledger \* 241000801

General Ledger Mask \* nnnnnnnnn      Transaction Code \* 000

**Spread**      **General Ledger Purge Days**

Spread Application Both Leg

Spool File Purge Days 90      ☐ Auto Batch

Inter Pay Lead days 3      ☐ User Restriction For Batch Number

☒ SSO Enabled

**Cheque Numbering Details**      **Checksum Algorithm**

Scheme      ☐ Lodgment Numbers Unique For Branch

☐ Cheque Numbers Unique for Branch

**TRS Details**      **Suspense Account**

**Account Mask**    **Preferences**    **Fields**

Input By LC32702      Authorized By LC32702A03      Modification Number 152      ☒ Authorized

Date Time 2012-02-29 13:26:22      Date Time 2012-02-29 15:20:45      ☒ Open      **Ok**    **Exit**

## 2.7.2 Maintaining Branch Level DN Template (Branch Maintenance)

Go to the “Branch Maintenance” of FLEXCUBE UBS.

For each branch LDAP DN template should be maintained, which is used in the FLEXCUBE user maintenance Form to populate corresponding LDAP userid automatically from this template. Go to branch level parameter screen and Click on Preferences Icon.

E.g.: LDAP DN Template: cn=<FCJUSR>,cn=Users,dc=i-flex,dc=com

Here in this above template cn=<FCJUSR> part preferably must be there and it should not be altered, but the rest of the DN name can change based on the configuration.

**Branch Parameters Preferences**

Netting Suspense General Ledger	233200804	<b>Profit and Loss Adjustment</b>	<input type="checkbox"/> Track Previous Year Profit And Loss Adjustment
Walk In Customer	000003171	<b>Revaluation Split Details</b>	<input type="checkbox"/> Revaluation Split Required
Internal Swap Customer	000003171	<b>Suspense Product Maintenance</b>	
Clearing Account		Debit Product	
Offset Clearing Account		Description	
Weekly Holiday 1	Saturday	Credit Product	
Weekly Holiday 2	Sunday	Description	
Clearing Bank Code		<b>International Banking Account Number Masks</b>	
MIS Group For Currency	<input type="checkbox"/> Interdict Validation Required	Bank Code	aaaann
Interdict Timeout Interval		Account Number	aann
Status Processing Basis	Contract Level	<b>FGL Integration</b>	<input type="checkbox"/> FGL Handoff Required
Provisioning Frequency	Daily	<b>ELCM Integration</b>	<input checked="" type="checkbox"/> ELCM Replication
Uncollected Funds Basis			
Uncollected Funds	<input checked="" type="checkbox"/> Deferred Statement Generation		
	<input type="checkbox"/> Enterprise General Ledger		
Minor Age Limit (Yrs)	18		
Notification Days			
Cheque Stale Days			
Limit Expiry Advice Notification Days			
<b>Back Value Details</b>	<input type="checkbox"/> Back Valued Check Required	<b>LDAP DN Template</b>	
Back Value Days		LDAP DN Template	cn=<FCCUSR>,cn=Users,dc=oracle,dc=com
<b>LCY Message Preferences</b>			

Ok Exit

### 2.7.3 Maintaining LDAP DN for FCUBS users

For each user id in FCUBS a user has to be created in the LDAP.

When creating the user in LDAP, ensure that the DN used is same as the LDAP DN value that will be updated in user maintenance form. Once the user is created in LDAP go to the user maintenance form in FCUBS. If the FCUBS user already exists then unlock the user and update the LDAP DN value which was set when creating the user in LDAP. Click on Validate button to check whether any other user is having the same LDAP DN value.

LDAP DN value should be entered as complete DN value.

eg.

cn=FCUSR,cn=Users,dc=oracle,dc=com

User Maintenance

User Details

User Identification \* FCUBSUSER

Name \* FCUBS User

User Reference

Language \* ENG

Home Branch \* 004

Customer No

Department Code

Department Description

Tax Identifier

LDAP DN FCUBSUSER

Time Level \* 9

Amount Format

Date Format

Auto Authorization

Validate

User Status

☒ Enabled
☐ Hold
☐ Disabled
☐ Locked

Classification

☒ Staff
☐ Branch

Status Changed On

Last Signed On

☐ Staff Customer Restriction Required

ELCM User ID

☐ Multi Branch Access

User Password

Password

Password Changed On 2012-01-06 11:01:33

Email

Start Date \* 2012-01-06

End Date

Invalid Logins

Cumulative

Successive

Restricted Password

Roles

Rights

Functions

Tills

Account Classes

General Ledgers

Limits

Branches

Products

Disallowed Functions

Users Holiday

Fields

Group Restriction

Centralized Role

Maker KANNAN1

Checker SARAN

Date Time: 2012-01-06 13:29:56

Date Time: 2012-01-06 13:34:26

Mod No 3

Record Status Closed

Authorization Status Authorized

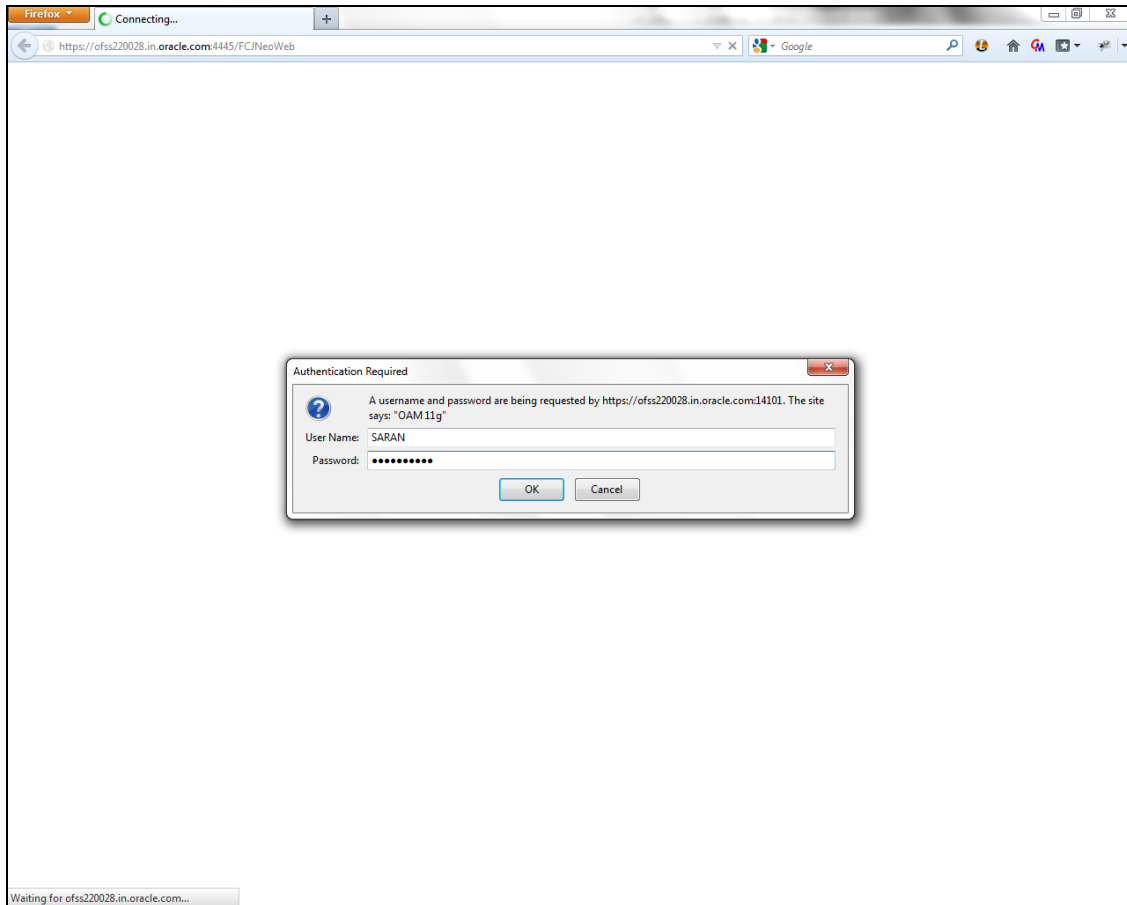
Exit

## 2.7.4 Launching FLEXCUBE

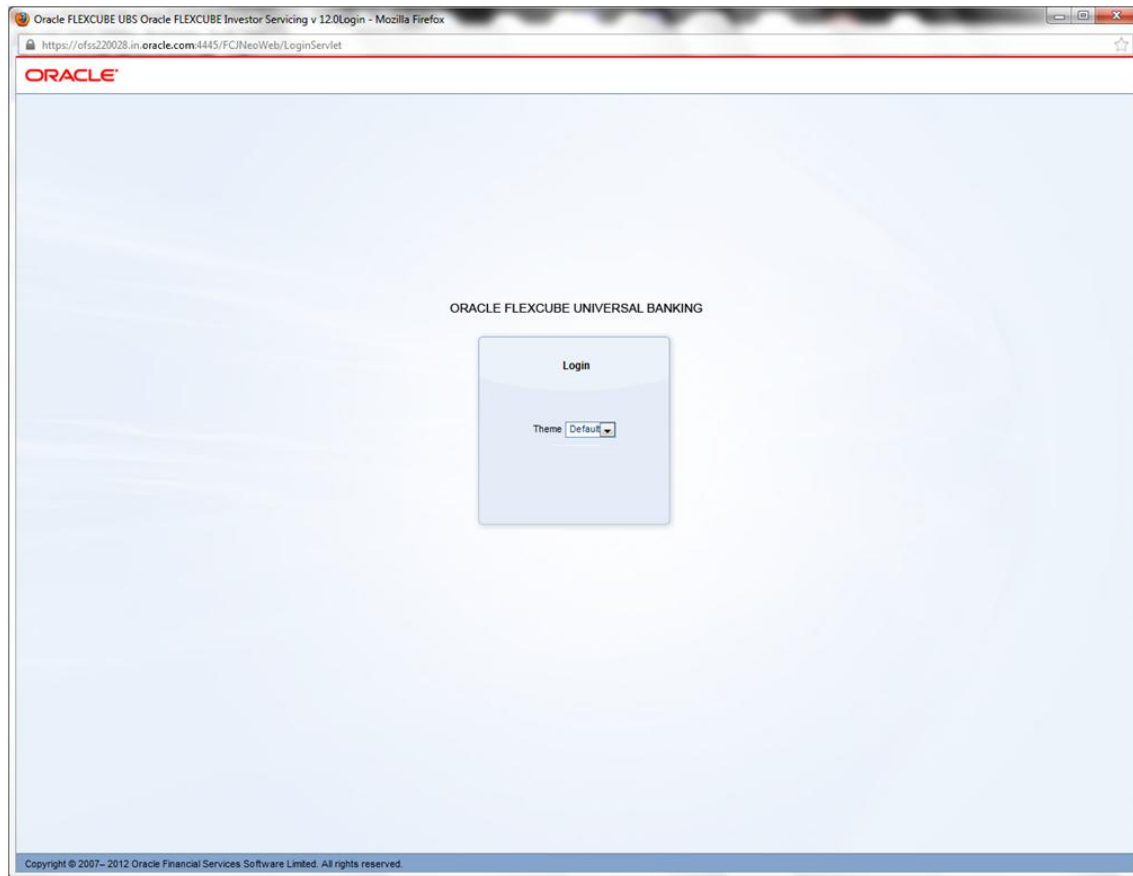
After setting up FLEXCUBE to work on Single Sign on mode, navigate to the interim servlet URL <https://<hostname>:<OHS SSL Port>/<Context Root>> from your browser

eg: <https://ofss00001.in.oracle.com:4443/FCJNeoWeb>

Since the resource is protected, the WebGate challenges the user for credentials as shown below.



Once the user is authenticated and authorized to access the resource, the servlet gets redirected to normal FLEXCUBE application server URL and now the new signon form will appear as below. The application will automatically redirect FLEXCUBE home page.



### 2.7.5 Signoff in a SSO situation

FLEXCUBE does not provide for single signoff currently, i.e., when a user signs off in FLEXCUBE, the session established with Oracle Access Manager by the user will not be modified in any manner.

In a SSO situation the “Exit” and “Logoff” actions in FLEXCUBE will function as “Exit”, i.e., on clicking these, the user will “exit” FLEXCUBE and will need to re-launch FLEXCUBE using the FLEXCUBE launch URL.





Oracle Access Manager Integration  
[October] [2013]  
Version 12.0.2.0.0

Oracle Financial Services Software Limited  
Oracle Park  
Off Western Express Highway  
Goregaon (East)  
Mumbai, Maharashtra 400 063  
India

Worldwide Inquiries:  
Phone: +91 22 6718 3000  
Fax: +91 22 6718 3001  
[www.oracle.com/financialservices/](http://www.oracle.com/financialservices/)

Copyright © [2007], [2013], Oracle and/or its affiliates. All rights reserved.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

**U.S. GOVERNMENT END USERS:** Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate failsafe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

This software or hardware and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.